**Executive Summary**

**Creating Highly Engaged Science Lessons in the Kindergarten Classroom**

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**Background**

The implementation of the Common Core Standards for Mathematics and English Language Arts in combination with the new North Carolina Essential Standards in Social Studies and Science have created a need for teachers to focus on identifying student learning outcomes, new assessments, and different teaching methods. In 2011-2012, Edgecombe County Schools performed well under the state average in science at 49% on the 5th grade End of Grade Science Test and 42.5% on the 8th Grade End of Science Test. Through walkthroughs and observations, the time allotted for science instruction was not being utilized to maximize science instruction for students.

**Brief Overview**

During the third quarter, Kindergarten teachers and the administrative intern participated in Science Professional Learning Communities (PLC’s) in an effort to:

* Collaborate to create highly engaged science lessons,
* Deepen understanding of the new N.C. Science Essential Standards,
* Define student learning outcomes for science standards,
* Focus on explicit science instruction in the classroom,
* and Increase student engagement and achievement in science.

The primary focus was on time spent on science instruction and the processes used to teach concepts and assess student learning. We began by reviewing the North Carolina Science Essential Standards, the Unpacked Standards document, and the Edgecombe County Schools Pacing Guide for Kindergarten Science. The Understanding by Design method was used for planning the quarter science unit. We first decided what we wanted the learning outcomes to be based on the Essential Standards and worked backwards to create assessment questions and lessons. Each time we met, we discussed student performance on assessments, what the teachers needed to do in their instruction based on student performance, and shared resources for the next set of lessons.

**Evaluation and Effectiveness**

The Kindergarten teachers were successful in meeting to discuss student learning objectives, assessment results and create lessons. 6 of the 7 Kindergarten teachers reported that their knowledge of content and concepts has increased as a result of our Science PLC’s. They also reported that their knowledge and comfort with explicitly teaching these concepts has increased. Teachers stated that they have improved their science instruction. All of the Kindergarten teachers reported integrating the science concepts daily in their lesson planning. 4 of the 7 Kindergarten teachers report that they have increased the time they spend teaching science concepts. All of the teachers agree that their student engagement has increased due to more explicit science instruction. 5 out of 7 Kindergarten teachers agree that their students’ achievement in science has increased. 1 out of those 5 Kindergarten teachers strongly agrees. The 2 other Kindergarten teachers neither agreed nor disagreed. Teachers used performance on assessments, as well as informal formative assessments in class to determine student achievement. As the administrative intern, I have also seen an improvement during walkthroughs, observations, review of assessment data and student products.